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Ecologies and economies of action—sustainability, calculations, and other things

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Abstract. In ecological, environmental, and urban-regeneration terms, the participatory turn and the turn to action have been written about at length in both academic and official literatures. From neighbourhood renewal to lay ecologies, people are being 'given' all kinds of agency in the making of economy and ecology. Yet relatively little has been said regarding the financial organisation of this new populism, which is often achieved through calculation and audit, and the framing of a return. In this paper we look at the uneasy coalition of civic action and its calculability. It focuses on the funding and running of a British Pakistani and Bangladeshi women's gardening initiative in inner city Birmingham, England. We fuse empirical work with gardeners and funding agencies with theoretical understandings of calculation in order to argue for a mode of organisation that not only includes a responsibility to act but also a responsibility to otherness. Rather than arguing for or against calculation, we describe a more diverse ecology of action and in so doing open arguments for reconfiguring the ways in which sustainable activities are funded.

1 Introduction

There have been some interesting if problematic overlaps between recent retheorisations of social economy (Callon, 1998a; 1998b; DuGay and Pryke, 2002; Gibson-Graham, 1996; Miller, 2002a) and policy moves which highlight the agencies of members of civil society. In both areas there is a turn to action, to the engagement of people (but never only people), a turn away "from a passive consumer society" (which of course never really existed) to "society as an active consumer-participant in knowledge production" (Leadbeater and Miller, 2004; Strathern, 2004, page 467). Agencies are everywhere, making 'things'. They make economies, they make rationalities, they even make natures (Hinchliffe et al, 2005; Latour, 2004a). These agencies are collective matters, made up of all manner of humans and nonhumans, technologies and biologies. The point here is that, as feminist theorists (Gibson-Graham, 1996), thing-power theorists (Bennett, 2004), and those associated with actor-network theory (Latour, 2004a; Law, 2004a) attest, differences matter and matter differentiates. To be sure, societies are organised, sometimes repetitive, seemingly therefore structured, but such stabilities are themselves achievements which require all manner of human and nonhuman actions (Law, 1994). Orderings are not visited on the scene from outside, nor are they historically necessary and/or inevitable. If there is transcendence, it is the minitranscendences of uncertain

complicities and contingencies, fired by the cogeneration of things in relation, that breeds the new [but does not guide action from afar (see Bennett, 2004; Latour, 2004a)].

We take it that the task for social science is to chart and intervene where possible in these differences in the making. A first step is to refuse singularities, or definite single processes (Law, 2004b), or noncaused causes, and note the multiplicity of forms that are characteristic of social actions. So, for example, in terms of economy (and we could substitute 'economy' in this passage for 'nature' or other expert category) this involves asking the following kinds of questions:

> "What if the economy were not single but plural, not homogenous but heterogeneous, not unified but fragmented? What if capitalism were a set of different practices scattered over the landscape that are (for convenience and in violation of difference) often seen as the same? If categories like subjectivity and society can undergo a radical rethinking, producing a crisis of individual and social identity, can't we give Capitalism an identity crisis as well? If we did, how might the 'socialist project' itself be transformed?" (Gibson-Graham, 1996, page 260).

The project in part involves the recognition that there are new political economies to be made and in the making, ones partially connected to but not determined by Economy (now read as the outcome of a multiplicity of practices). Similarly, there are other political ecologies being practised and to be practised, divorced from a transcendent Nature.

In this world without fixed causes, a second step is to make practice and practitioners causes to celebrate (Barry et al, 2002; but see also Fine, 2003 for a critical commentary). Or at least, it is to make what formerly might be held to be nonexpertise as a resource for possible innovation, and to think of a project whereby expertise is less about distant judgments and more about learning to gather together in innovative ways (on gathering see Latour, 2004b; Law, 2004b). For social science this requires a change of stance, away from distanced, expert critique and towards the crafting of cooperative ventures (see also Hinchliffe et al, 2005; Stengers, 1997). Michel Callon puts it like this:

> "If we accept the idea of the non-existence of macro-structures in which micro-structures are embedded, and if we accept the idea of localities framed and connected to each other, I think that sociologists should try to identify the actors who are able to transform the frames in which they are located, and to transform other places because they are located in a very strategic place. It's another way of describing how social scientists can link themselves to social actors. There is no longer a contradiction between choosing actors or situations as objects of research, and co-operating with actors who are considered subjects by themselves. And it's a non-zero sum game. On the one hand, actors are interested in this form of co-operation because they can enhance their capacity to describe and analyse their own experience and, on the other hand, social scientists are also interested in co-operating because they can mobilize actors as colleagues who are as competent as academics or scientists" (Barry et al, 2002, page 302).

Celebrating inexpertise is not necessarily new of course (as numerous attempts to unsettle expert categories of man, woman, economy, animal, the global, the local, and so on have sought to demonstrate). What is new, and as a third step, is the attempt to rescue from this decline of experts and their objects a politics of intervention that is spatially up to the task (a task that is now more demanding in spaces that are not limited to the expert inflected dualism global – local). And, in contradistinction to the championing of a form of costless, 'local' civic action beloved of many governments of the so-called new left, the project becomes one of rescuing a politics that is alert to the insufficiencies experienced when civil society is favoured over the state (see Fine, 2001; 2002; Mohan and Mohan, 2002), but which at the same

time recognises the vital role of nonstate agencies in the reconfigurations of societies (or associations).

This paper is one attempt to open up a discussion of such matters, relating to a specific set of practices which aim to green urban areas in the United Kingdom (see Hinchliffe et al, 2003 for an overview). The work on which we draw in this paper is focused on two cities in England, and on six project sites (covering a range of activities from habitat restoration, to conservation and cultivation). All involved a number of organisations, from 'friends of' groups to local, regional, and national bodies who were woven into and through our sites. A good deal of the work in the field and the analysis has engaged with the practices involved in *doing* urban greens, with attention to the unspoken, the embodied, and the relational acts that make conservation, cultivation, and so on possible. In so doing, the project has focused upon the actions of both so-called experts and so-called amateurs that are seldom discussed in formal accounts of knowledge and knowledgeability (see Degen et al, forthcoming).

A formative field experience in terms of this paper was the mundane observation that everywhere we went, from field to field, from organisation to organisation, from office to office, people were directly and indirectly responding to a peculiar formatting of relations that seemed in one way or another to have something to do with money—or rather with exchange, and the responsibilities, or types of responses, that are constituted as exchange and other relations are practised. So this paper is about the ways in which these environmental and economic relations are being enacted—and, having described some of the landscape, we open up some possible ways of intervening in the making of these relations.

We start with a broad description of current modes of organisation for urban environmental action, their reliance on civil society and on calculation and audit. In the second part of the paper we follow the development of an urban green project. In doing so we draw out the tensions involved in enacting social economies. Far from being a matter of economic order being grafted onto noneconomic relations, we demonstrate that economic and noneconomic, the calculative and noncalculative, are multiple and exist in mixes. A key term for us is ecologies of action which refers not to a romanticised notion, but to the positive and negative interferences that are produced as various acts are framed, enacted, performed, and so on. We use this term to start to make sense of the ways in which calculations and noncalculations are sometimes coconstitutive, sometimes detrimental to one another and always in process.

In the final section of the paper we argue that these mixes offer more resources for political intervention than the more-conventional social-science imagination that the economic and noneconomic exist as separate realms, with economy being championed by moderns and noneconomy defended by romantics. Our conclusion suggests that being watchful of the ecologies of various modalities of action can offer openings for a politics that is less infected with a capitalist imaginary. For it is the more conventional political-economic imagination that can make the suppression of big Capital both unimaginable and impractical (see Gibson-Graham, 1996, pages 4–5). Refusing this romance of defeatism, this paper marks a contribution to the rebuilding of a more-nuanced but nonetheless radical politics of political economies and ecologies.

2 Enacting the environmental

Civil society is now accorded a significant role in the production of environments in the United Kingdom. The Urban Green Spaces Task Force, along with a number of other recent government and official publications (see, for example, CABE Space, 2003; DEFRA, 2002; ODPM, 2002), held great store by the actions of voluntary and community groups:

"Change is often being led by voluntary and community groups .... Once voluntary and community organisations are involved, they can achieve an enormous amount in articulating local needs, creating or renovating community green spaces, and getting involved in managing traditional parks" (DTLR, 2002, page 71).

Along with a desire to harness a skills base (there is plenty of lay expertise around), to foster diversity and cogovernance in environmental action, and to develop ownership relations between people and green spaces, there are also potential cost savings to be made when civil society takes on certain prescribed forms of labouring and responsibility for green spaces. These policy and governance moves are not restricted of course to urban green spaces in the United Kingdom. They apply to a broader reshaping of environmental governance and community development [including the community gardening movement which is particularly developed in the United States (see Blomley, 2004)].

Although the turns to participation and action have been written about at length in the official literature, and although a good deal has been written regarding the changing knowledges that can (but do not always) follow this democratisation of expertise (see Goodwin, 1998; Strathern, 2004; Waterton, 2004; Waterton and Ellis, 2005), relatively little has been said regarding their financial organisation and coordination. Yet, in every case that we have studied, there were instances where groups either needed to, wanted to, or were encouraged to raise finance in order to carry out or enhance their activities. These ranged from funding accessibility projects (conveniences for disabled users of allotments), to gaining physical support for rubbish removal, to generating new cultivation activities on small areas of land, to bidding for larger grants in order to raise the conservation status of a site or feature. Meanwhile, fundraising was often an exacting and long-winded process, one that had potential effects on the ways in which the social and the environmental were enacted.

Our focus in this paper is on a particular project which aimed to develop cultivation on disused and underused public, domestic, and allotment gardens, and which explicitly aimed to develop gardening and environmental activities among groups of British-Pakistani, Kashmiri, and Bangladeshi women living in inner-city Birmingham. Before we say a little more about this venture we need to briefly characterise the current financial setup that pertains to these kinds of projects.

2.1 Opportunity funds

Funding for both government-assisted partnerships [such as, for example, Neighbourhood Renewal Funds (see Hall and Hickman, 2002; Johnson and Osborne, 2003)] and nongovernment public projects [or projects that are 'additional' to the normal workings of government, see Department for Culture, Media and Sport (2003) for an account of the distinction] can be characterised as 'opportunity' funding. In effect this means that obtaining funding for an activity would not normally be regarded as a means to develop a funding-dependent activity. In other words, it is expected that funds 'kick start' an activity which then needs to build its own self-sufficiency over the course of the funding period such that, by the time funding ceases, it can meet its own running costs, and/or those people involved can translate the social, human, or other capital into other areas of economically sustainable (meaning self-sufficient) activity (see, for example, DTI, 2002; SEL, 2001; and for a critique, Black Environmental Network, 2000).

We will say more about the temporal and spatial framing of funds as we develop the empirical material. For now, and jumping ahead, it could be argued that a particular version of sustainability is being played out here—one that privileges economic self-sufficiency as a means to a sustainable environmental sector (making environmental

matters pay). It would be relatively straightforward to pass judgment on this arrangement as a means by which a certain form of market rationality is visited on activities that have previously been outside the economic sphere. It could be argued that economising in this way privileges the wrong things, externalises the right things, and serves only to infect formerly untainted spaces with a calculative mode of operation. Part of this may be right, and there are good reasons to be cautious, but before rushing into a critique, and in so doing positing a rather romantic view of noneconomic activity, it is worth developing a more-detailed picture as to how this setup does (and does not) work. The description enables us to craft a more-informed and hopefully more-constructive engagement with current enactments of sustainability.

The action takes place in Small Heath and Saltley, part of East Birmingham, 1 – 2 km from the city centre (see figure 1). These are two of the more socioeconomically and environmentally challenging parts of the city. They fall within the worst 2.5% of enumeration districts nationally on indicators of multiple deprivation. The area is predominantly British Muslim, with nearly 80% of the population classing themselves as 'minority ethnic' (compared with nearly 30% for the city as a whole). Health and social exclusion (especially for women) are problems and many of the residents live over 500 m from a site of environmental quality (as defined by English Nature and Birmingham City Council, making it a wildlife and open-space action area for the city council). In the common parlance of sustainable development, this area is economically, environmentally, and socially disadvantaged.

A segment of the first round of Single Regeneration Budget money enabled Community Service Volunteers (CSV) Environment to locate in East Birmingham and to set about raising funds in order to start a number of environmental projects. CSV Environment is part of the larger organisation called CSV. CSV is the largest training and volunteering organisation in the United Kingdom, aiming to foster community development, through voluntary labour, skills development and skills training nationwide. CSV Environment is a small subsidiary, accounting for roughly 2% of the charity's total annual spend (CSV, 2003). It shares a similar ethos to CSV, focusing its attention on environmental work, including community gardening, city-based composting and recycling schemes, education for sustainability, and so on. With its headquarters in Birmingham, CSV Environment prides itself on reaching and working with people and environments that are often underrepresented in mainstream environmental campaigns and actions.

One of the Birmingham-based environmental projects was to develop an initiative to bring derelict land and gardens under cultivation. In the late 1990s CSV Environment secured three years funding from the National Lottery [administered through what was at the time called the National Lottery Charities Board (NLCB), and which quickly became the Community Fund, and is now part of the merged Big Lottery Fund]. The project became known as 'Concrete to Coriander'.

In the next section we outline some of the processes involved in generating funding for Concrete to Coriander, processes that result in the formatting of relations between funding agencies and recipients of funding. Following this we will describe the day-to-day running of the project, focusing on the diversity of issues involved in a project like this. Our aim is to demonstrate the relational work involved in making a project successful and to lead into a discussion, in the final part of the paper, of how this experience can feed back into debates on the development of sustainable environmental actions.

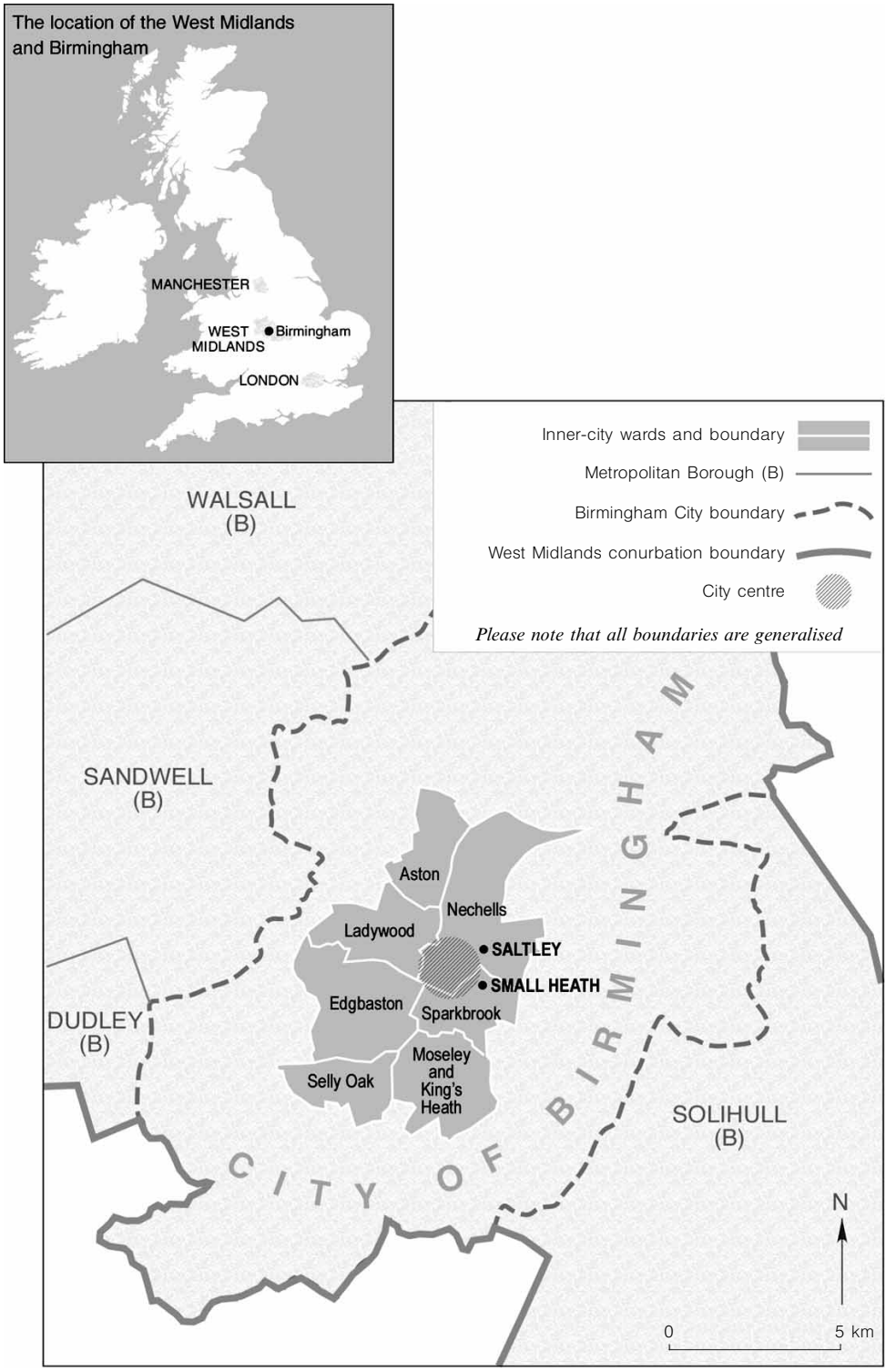


Figure 1. Maps showing the location of Birmingham and the West Midlands relative to the British Isles, and Saltley and Small Heath relative to Birmingham city centre.

3 Securing funds—formatting the gift relation

For Bourdieu (1977), differentiation between noncalculative action, or gifting, and calculative action is a matter of describing the temporal framing and experience of the return (see also Callon, 1998a). In gifting, there is a sufficient time lag between the act of giving and the return, which makes the experience one of good will [an aspect of gifting emphasised by Mauss (1967)]. For calculative action, on the other hand, returns are expected rather more directly. The experience is self-interest and calculative [emphasised by Lévi-Strauss (1987)].

Therefore, rather then there being a distinction between gifts and calculative action on the basis of either conscious or unconscious expectations of reciprocation, Bourdieu's differentiation has the advantage of allowing for a blurring of boundaries between what seem at first blush to be distinct modes of action. The difference between gifting and calculating seems, in part at least, based upon the extent to which the return is inside or outside the frame of reference. If inside, then, the exchange is calculated. Outside the temporal frame, it is experienced as a gift.

Although limited, this schema is useful, as Callon (1998a; 1998b) has demonstrated, in understanding the practices involved in the constitution of products and goods. Using Callon's approach, we will now suggest that charitable funding is increasingly being experienced as calculative, in that returns are formalised and brought inside the frame. So much so that projects begin to look increasingly like goods which are traded in a marketplace for charitable actions. Funding practices, or the practical tasks of gaining, allocating, and spending project funds are processes in which frames are established and returns are specified. The returns are, to use Callon's terms, disentangled from their contexture. That is, they are successful 'forcings out' that can circulate and stand apart from and for a project, and in this sense act more like goods than gifts (Callon, 1998a, page 36). Gone are the days, we have been repeatedly told, when charitable gifts would be presented with little or no expectation of formal return (other than long-term social benefit). However, we will also suggest, again following Callon (1998a; 1998b), that this formalisation of the return is not as clear-cut as we might expect. Every disentanglement also opens the way for entanglements. Threads that link together and embroil those people and things that made the disentanglement a possibility proliferate in the very act of making it happen. It is this dual process that informs our desire to investigate ecologies of action, the various ways in which disentanglements and entanglements compete, interfere, coexist and cooperate, to produce lasting effects. We can now look at the enactment of disentanglement, and thereby the possibility for calculation, in the formatting of the Concrete to Coriander project.

3.1 Formatting projects

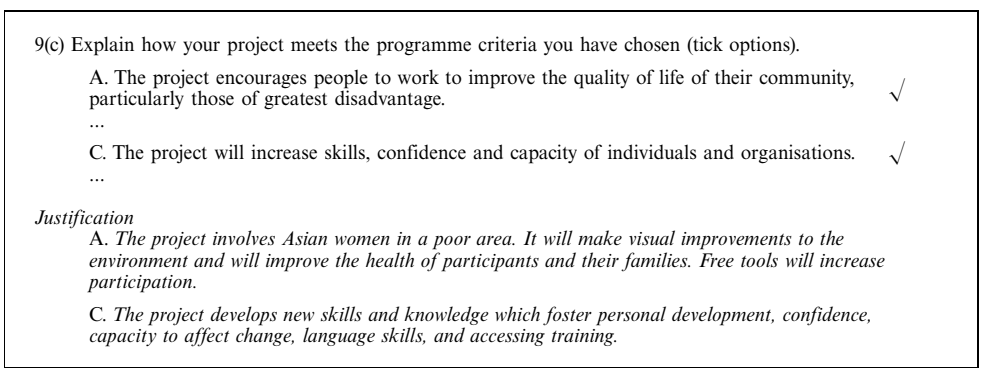
In the initial stages of applying for money, project proposals are qualified in response to the funding landscape. In other words, projects are storied in such a way as to meet the objectives of a funding scheme and/or organisation. This is a process of making a project relevant to the funding organisations (who themselves need to remain relevant to their own funders, or quasifunders, which can mean anything from lottery-ticket buyers to government departments, from the National Audit Office to shareholders).

This work of formatting a project is in part enacted through the drafting and then the filling out of application forms. Forms, as their name perhaps suggests, can do a good deal of the shaping work. They are spaces for sorting, relating, and ordering matters of importance, for making a case that is already partially prescribed by the format of the form. CSV Environment's application form to the National Lottery Charities Board involved matching the proposed project to several programme criteria.

Here we follow the options chosen by CSV Environment for Concrete to Coriander (see figure 2).

The project is matched to programme criteria, with matches supplemented by short statements that demonstrate in words how the programme criteria are to be met. This is a process that is similar in many senses to that which is ascribed by Callon and Muniesa (2002) to the production of markets for goods. There, a process of qualification ensues whereby a good is simultaneously objectified and singularised. "Objectified because the properties which qualify it by defining it have progressively been stabilized and set; and singularized because these properties have been determined in such a way as to adjust it as well as possible to suit the client's needs" (Callon and Muniesa, 2002, page 8). In our case we are seeing a process whereby a project undergoes qualification in terms of its formatting—its properties are being settled (it is about particular people, aiming to produce particular skills and so on), and, at the same time, those properties are being adjusted to the programme (and thereby to a host of other relations that help to formulate the expressed criteria of the programme). In practice, and to be successful, applicants and funders start to speak a similar language. And, importantly, just like the moment at which the worlds of the seller and consumer are brought together, they start to make the project, or good, calculable. That is, they start to set the conditions by which the project can be judged—both in terms of its suitability for funding and, assuming funding is provided, in terms of the extent to which it meets its own targets. The important point here is that this is not simply a matter of matching a good to an already existing market. Rather it is the simultaneous shaping of a market, or the conditions for exchange between funder and applicant, that marks this making calculable of a project.

Making calculable is, as we have suggested, partly about defining returns, rendering activities in terms of their outcomes, and setting the temporal and spatial coordinates of returns. It is worth saying a little more about what we understand by the term calculation at this point.


9(c) Explain how your project meets the programme criteria you have chosen (tick options).

A. The project encourages people to work to improve the quality of life of their community, particularly those of greatest disadvantage. √

...

C. The project will increase skills, confidence and capacity of individuals and organisations. √

...

Justification

A. *The project involves Asian women in a poor area. It will make visual improvements to the environment and will improve the health of participants and their families. Free tools will increase participation.*

C. *The project develops new skills and knowledge which foster personal development, confidence, capacity to affect change, language skills, and accessing training.*

Figure 2. Stylised extract from the application form for funding for the Concrete to Coriander project. The form formats the project.

3.2 Calculations

There is a long tradition in the social sciences that charts the rise of the rational and spatial expansion of a calculative mode of address (see, for example, Porter, 1995; Power, 1997). Attention has also been paid to the variety of practices that are involved in calculative action (Callon, 1998a; 1998b; Callon and Law, 2005; Callon and Muniesa, 2002; Mitchell, 2002; Thrift, 2004a). Rather than assuming calculation to be a dead end, a process by which the world and its inhabitants are racked up and killed off, this literature suggests a more politically interesting landscape. It is a landscape where calculations can still produce negative effects, but if they do so then

we need to look at practices rather than seek to blame transcendent orders. In other words, calculation is severed from a universal or even other-worldly understanding of rationality. It is brought back down to earth and understood as a set of distinguishable but nonetheless variable practices.

In this regard, calculation can be characterised as "a process in which entities are detached from other contexts, reworked, displayed, related, manipulated, transformed, and summed in a single space" (Callon and Law, 2005, page 730). All this work is carried out by calculative agents, or calculative agencies as Callon and colleagues prefer to call them. The latter, plural, term emphasises the collectivity and materialities involved in all calculations, that agents are not individual people but heterogeneous collectives of buyers, sellers, instruments, forms, and so on (Callon and Muniesa, 2002, page 8). We should also note at this point that calculation is not necessarily quantitative—although enumeration is a common means to calculation, it is rather the process of setting out, defining terms, and transforming materialities that characterises the practices at issue here [or qualculations as Callon and Law (2005) and Cochoy (2002) term them; see also Thrift (2004a)].

Calculation involves disentangling matters, re-presenting them in a form in which they can be manipulated, a process that requires work and is seldom seamless or smooth. As Callon and others have demonstrated, neither markets nor calculations are natural or determined. It takes a good deal of effort to set up and set out entities, to disentangle goods in order to make them calculable, and simultaneously to entangle them in the world of the potential customers. Equally, calculations take many forms, with many different outcomes. This is the case even within seemingly coherent organisations. For example, funding practices at the National Lottery have varied between distributing agencies and their calculative practices. Although all distributors required measurable returns for funding, the Community Fund (formerly the NLCB) have been a relatively light touch, requiring annual returns and yearly spending plans. At the other end of the spectrum, the more government-directed lottery distributor, the New Opportunity Fund (NOF), demanded quarterly returns with full spending reviews needing to be audited prior to the release of the funds for the next quarter. The increased frequency of return necessitated a larger administration burden on funded organisations and seemed to lessen the degree of flexibility in project spending. This variability in practice has recently become a matter of debate as the Community Fund and NOF have been merged to form the Big Lottery Fund. We return to this debate towards the end of the paper.

An important issue at this point is to note that, if calculations are variable social practices, practices that involve numerous associations and dissociations, then it follows that markets, too, are highly variable social practices. The result is that "the market is no longer that cold, implacable and impersonal monster which imposes its laws and procedures while extending them ever further. It is a many-sided, diversified, evolving device which the social sciences as well as the actors themselves contribute to reconfigure" (Callon, 1998a, page 51). The upshot of this interest in the *practices* and *indefinable variability* of calculation is that "the organisation of markets becomes a collective issue and the economy becomes (again) political" (Barry et al, 2002, page 197).

The multiplicity of calculation is one crucial aspect of its partial rehabilitation. To this we can add possible democratic benefits. Calculations assist in the coordination of actions in time and space, in ways that are relatively straightforward to administer and enact. Aims, objectives, targets, deliverables, and sometimes numbers are generated and audited in order to enact a set of procedures that are justifiable, accountable, and responsible (Porter, 1995). Charity and government is networked through calculations. They configure "future-oriented action governed by the anticipation of being

held to account, expected to give reasons and asked to make justifications" (Barnett, 2004, page 522).

So, given that calculations may have democratically positive effects, and that their operation and effects are not determined by an external form of rationality, there is a possibility to engage with calculations as politically contestable domains of practice. In order to conceptualise the politics of calculation we will look at framing processes.

3.3 Framing effects

> "In terms of ministerial expectations ... when we get Parliamentary questions they'll tend to be, 'How many playing fields have you funded or [such like]' ... and that's not necessarily what we've wanted to focus on but, I guess that's what we've increasingly been pushed towards focusing on .... We don't get asked about the community involvement and whether people are particularly happy about certain things having happened."
>
> Angela, Manager, New Opportunities Fund (interview 10 October 2003)[1]

This quote illustrates two things—first, calculations move along a network, from project to programme organisers, then to government ministers and many more besides. In doing so, calculations enable a project to circulate. Second, some things circulate better than others. Or another way of saying this is to note that some things make better immutable mobiles than others (see Latour, 1987). Numbers of football pitches circulate better, in this mode of organisation, than happiness. We could add that as these numbers circulate they can be aggregated in order to provide a global picture. They are combinable mobiles (Latour, 1987, page 227). So there is a tendency to generate numbers of similar things across a range of projects.

This requirement for things to circulate and to be combinable can have effects. As we have already noted, setting deliverable targets, auditing the delivery of those targets and being accountable to governments, consumers of lottery tickets, and so on, formats project money. At the same time, formatting can push certain issues 'into' and other issues 'out of' the frame of reference. So returns are measured in terms of numbers of football pitches (or the like) rather than happiness or community involvement, and are then aggregated to provide a national picture. It is to this framing process, marking certain matters in and other matters out, that we now turn.

Here is what the director of CSV Environment has to say about funding practices.

> "The constraints on funding have been that [it] tends to be for visible actions on the ground. The funders expect physical outcomes for their money, whether it's the number of trees planted or whatever. You know there needs to be some sort of quantifiable output with a lot of funding. And I think that has meant that we've generally employed staff who have been very focussed on the delivery of whatever piece of work it actually is. And what we've not been able to do is to actually develop an infrastructure that actually supports those project officers" (Neil, CSV Environment, interview, 27 May 2003).

Neil is talking about the relative demise of core funding, the unrestricted income that can be used to develop an organisation, and which is derived from, for many charities, membership fees, bequests, trust funds, borrowing on assets, and so on. (In passing it is worth noting that, in the more-established, white, middle-class environmental sector, unrestricted funds are somewhat easier to come by—membership and other sponsorship is the traditional means by which such funds are raised. There are few such luxuries for CSV Environment, engaged as they are in less-fashionable, and perhaps, what is considered as, more-directly 'political', work).

[1] All names have been changed.

In a calculative climate, core funding is increasingly being replaced by project funding, money that is restricted to project delivery. As a result, the tendency is for charity to be directed to visible outcomes. Presents must present, so to speak [although see Callon and Law (2005) on a different rendering of presence and presents]. Trees, football pitches, and numbers of visitors are disentangled, entered onto forms, circulated, and audited.

In the case we are following, the making present of returns involved a shift from alluding to more-or-less tangible differences, like enjoyment, to specifying entities that could more easily be recorded, circulated, and returned, like numbers of reclaimed gardens and numbers of participants in activities. The shift is evident in the development of the funding bid in sections 10a and 10b of the application form. Section 10 is titled "Monitoring your project" and the completed form is shown in figure 3.

10(a) List three ways your project will make a difference and tell us when the results are likely to be seen

"... enjoy an enhanced local environment through a reclaimed garden ...

... benefit from growing fresh organic vegetables and selling or exchanging them through a coop ...

... see a reduction in general levels of waste in the community through recycling and composting.

The benefits would be seen within six months. The visual improvement will be dramatic."

10(b) Please describe how you will measure and record your results.

This includes how you might prove that people or organisations who benefit from your project will be able to do the things listed in question 10(a). Tell us what records you will keep and how often you will review what is happening. Tell us how you will use your results to decide what action to take in the future.

"Quantitative measures will be kept of the number of gardens brought back into productive use; the number of people/women introduced to vegetable growing; the number of people/women involved in recycling green waste; the numbers of school children involved in the project and the number of women involved in vegetable cooperatives.

Before and after photographs of gardens will be taken.

Regular written reports and overall reports will be produced.

The project steering group will monitor progress and take action if necessary."

Figure 3. Stylised extract from the application form for funding from the Concrete to Coriander project. The project is framed and made to count.

So the project is made to present in particular ways that satisfy the accountability requirement of the funding agency. Numbers are to be generated, along with before and after photographs (see figure 4) and reports. They are things that can stand in for 'improvement', they can circulate and thereby return. This is another instance of formatting, making calculable, and, in the case of constituting a steering group, demonstrating competency and reflexivity as an organisation [a kind of virtualism, see Miller (2002b)]. It is also a framing of the return and involves making some things present and others absent.

Barry and Slater (2002) note that in this process of framing, of defining returns, it is more often than not the "possible objects of political contention that are placed outside the frame" (2002, page 185). It follows that calculation can have the effect of depoliticising, at least in part, an action. Equally, and no doubt related in some way, it is those things that are less prone to being treated as entities, less-easily disentangled, that circulate poorly, and that would make the audit trail more complex and therefore expensive, that are left out of the account (as we have already suggested, community involvement and enjoyment are not as easy to measure and move around in this respect). Materialities are being figured. As Thrift, following Verran (2001), suggests, such figured ontologies are widespread and are "the real winners of the ontological wars, defining not so much what is to be done in any situation

(a)

(b)

Figure 4. Photographs taken (a) before and (b) after the development of the Small Heath Park Garden.

but how the situation turns up in the first place" (2004a, page 587). Nevertheless, these authors go on to note that other matters are not necessarily framed out of all existence. Indeed, in practice, there is far more movement in the frame and in the hinterland (Law, 2004b) that surrounds and makes the frame possible. Neil at CSV Environment is clear that there is more to a successful project than formal returns:

> "It's a bit of a juggling act [...] at the end of the day I'm obviously interested in the quality of the work that we actually do and how responsive that is to community need. But obviously I need to recognise that in terms of getting funding I'm going to have to actually satisfy the needs of the funder. So it's a bit of a balancing act really. To some extent it's actually playing the game or at least the funder's game but trying to come up with quantitative outputs that are not actually going to cripple the project. Because I think that's the great danger. There's always a temptation that the more figures you can write in, the more chances at the end of the day that that will provide you with the money" (interview, 27 May 2003).

So one story to tell here is that calculative agencies (the application forms and the audit trails, the people, plans, and so on) can produce effects, defining, transforming, and relating matters inside and outside the frames of reference. In the process certain things gain in significance and other things can drop out of the frame of reference. For Neil it is all the work of running an organisation, of getting projects off the ground, of dealing with others, that is rendered less visible. In other situations we have heard complaints about only ever receiving money to plant trees, which are easily enumerated and fit into various climate-friendly, forest-friendly, and other aspects of an increasingly target-friendly environment, rather than engage in more-complex ecological processes. What emerges is a story of centralisation wherein organisations are shackled and allowed little if any room for manoeuvre.

There can be little doubt that calculative agencies have effects. They have participated in a change to organisational practices, making things accountable. The income streams of organisations like CSV Environment have to greater or lesser extents shifted from unrestricted to restricted formats. And yet there is another story that can be told. The funding relation is also a game (the funder's game as Neil puts it), that is played by applicants as well as funding distributors. Things aren't quite as clear-cut as a story of omnipotent rationality might suggest [or even quite so historically structured as Miller's (2002b) march of an albeit contradictory virtual audit society would suggest]. In practice, frames perform intermittently.

In the next subsection we look at the further enaction of the Concrete to Coriander project, as it moves from the forms to the derelict gardens of Small Heath and Saltley. In so doing we will argue that disentangled, calculable matters are both made possible by and exist alongside entanglements of various kinds, and that there are other disentanglements that are noncalculative. In other words, we will argue that calculation and noncalculation exist in mixes and that the recognition of these ecologies of action is vital to the development of sustainable practices.

3.4 Overflows

We highlighted the suspicion that calculative agencies channel funds towards matters that can be disentangled, made present, and can be made mobile, a formatting and framing process that has material effects upon the ways in which projects can be run. Here we use empirical material on the day-to-day running of the project to highlight both the effects of formatting and framing on the running of a project and the ways in which the disentangling of calculable objects is enacted in a manner that is spatially and temporally complex. Our aim is to demonstrate that calculations are conditional upon all manner of entanglements as well as disentanglements.

The account is constructed from experiences acting as volunteers on the project over four, one-month-long, periods in 2002 and 2003. One of the team also work-shadowed the project officer for a period of one week. This participatory work was supplemented with interviews with various people associated with the project and its financing, and a focus group with the gardeners. We recognise that of all the views and

experiences of the project it is the women gardeners who are least well represented in this paper (though they are far from absent). This was largely a result of the practical difficulties of language, as even with a translator present, we tended to communicate more through shared gardening activities than through verbal reflections on the project. Although there are no doubt limitations to the methodology, the combination of words and deeds allowed us to develop a strong sense of the project, its successes and difficulties, and the ways in which it mattered.

Starting something like Concrete to Coriander is a formidable process. Before any targets could even be approximated, the whole project needed constituting. Access to disused gardens needed to be established. Plots needed to be cleared and landscaped to make cultivation possible. The women were not already assembled, pretrained, and confident enough to cultivate derelict or overgrown plots. (The community that is so often invoked in funding programmes and applications rarely exists in ready-made format.) Establishing the group, and getting it onto the land, was a mammoth task that took many months of meetings, persuading, and lobbying. The project officer needed to persuade councillors and city-council workers to believe that it was possible. Meanwhile, there were cultural and welfare sensibilities that needed to be treated with consideration. CSV Environment staff had already formed links to various community forums, women's centres, and so on, and it had already been established that a skills-based group would be an acceptable forum for women to meet together. Nevertheless, individual women needed persuading and in turn needed to negotiate family commitments and norms in order to give time and energy to the project. At the same time concerns over the effects of project work on state benefits also needed to be allayed.

The first months of the project involved the project worker meeting women, gaining their interest and support, and meeting their families. Early gardening work involved sharing gardening skills among the nascent group. Much of this involved demonstrating, physically, what the women might do in back and front gardens, and in container pots. Tools were purchased and a tool-loan scheme established. The project worker spent large amounts of her time moving from household to household, keeping potential gardeners involved by circulating tools, supplying seeds, compost, and other materials. Materials changed hands, and circulated. Plants and gardens changed form. Even hands changed as the women became handier at gardening. Training sessions were organised allowing the women to develop new skills. The range of gardening activities increased and within the first year the scheme had moved from back gardens to an ambitious attempt to turn a derelict area of former parkland into a productive vegetable garden.

After the first year of the project, CSV Environment were able to report to funding bodies that their number of twenty target reclaimed gardens had been exceeded and that the women were now taking on new, larger plots. They put the success of the project down to the experience and enthusiasms of the project officer and the degree of trust that existed locally for the project and for the organisation. What is hinted at in this reason for success is the number and complexity of the entanglements that made these disentangled measures possible. So in addition to disentangled gardens and numbers of women, tools were loaned, returned, and repaired. Seeds were purchased and crops harvested; friendships and antagonisms realised; passions for plants, for gardening, and for making a difference kindled. In other words, there were multiple exchanges, some calculable, some more difficult to calculate and some positively other to calculation. We can convey a further sense of some of these by following an excerpt from our research diary:

"A typical day involves meeting at the CSV Offices in Small Heath between 8.30 and 9.00, waiting for the project officer to arrive, finding as many garden tools as we can, checking someone has brought along the required organic compost, buckets of chicken-manure fertiliser, seeds, canes and any other supplies or equipment necessary for the morning's work. The equipment and materials are often in several different places (the project is a multi-site affair, making organisation more difficult). So a number of phone calls is necessary to other volunteers and to the gardeners to see who has what. Then, after a few more phone calls, we drive to several of the women's houses or flats to pick them up (stopping for a cup of tea and being introduced to family members). At one of the women's flats we fill at least thirty plastic bottles with water. (There is no mains water supply at the cultivation site, making the transporting of water across the city a weekly chore.) The woman who lives here has been helped by the project worker to move in and decorate the flat—her family was recently re-housed by the council and might well have been moved to another part of the city, which would have been a disaster for the project as she is a stalwart of the group. We then arrange to pick up more women. They all live within a mile or two of the sites but transport has become a major organisational issue. Most of the women are not used to or keen on walking this sort of distance and few had access to a car. Buses are not always convenient, particularly when carrying seedlings, gardening tools or water, and some of the women are not confident in using public transport. Fitting a morning's gardening in with otherwise busy domestic and work schedules means that the project officer is concerned to make transport to the site as easy for the women as possible. Finally, we weave our way through the Birmingham traffic to arrive at the site by (if we were lucky) 10.00. It remains only for the women to organise themselves and us so that the tasks to be done are completed by the time that many of them have to leave (around noon). Some of the women work in the polytunnel, thinning seedlings of plants that, they tell us, remind them of their youth in Bangladesh. Others clear plots of weeds and plants that have gone to seed. We help to dig the plots over, add fertiliser and sort out the blockage in the water butt."

Throughout the life of the project all manner of matters needed attending to and organising—from transport and housing issues, from tools to seedlings and cups of tea, to nitrogenous fertiliser and water supplies. Another way of saying this is to note that the women, gardens, and project officer became more and more entangled as the project developed. Gathering, even on a twice weekly basis, involved a good deal of work. Moving from being socially isolated to working in a community garden involved all manner of new commitments and enthusiasms.

Once up and running, the group could entangle themselves with all manner of things, from tomato plants, that needed regular watering and careful pinching out of side shoots, to council officials who might eventually provide a water source. Although there were opportunities to disengage for periods (owing to family, or other commitments) the women nevertheless kept up with the routinised but essential activities of turning the soil over, pulling out weeds, cutting rhubarb stalks, repotting tomato plants, and so on. Our point here is that from the physical work to enjoying the fruits of their labour, to friendships, and the care involved in tending plants, there was more to the project than the framed, disentangled, returns of the project. First of all, the women had their own calculations. Gardening was a safe way of enjoying being outside, it helped to produce a better and safer environment (these were key concerns of the women). They could provide themselves and their family and friends with fresh food, and could even sell some of their produce. Second, the gardening was as dependent upon entanglements as it was on disentanglements. Even as the disentangled,

calculable returns were being made (the gardens took shape, the numbers of participants matched and sometimes exceeded the target numbers), many other matters made this fabrication possible. There was, in other words, a multitude of externalities that made the garden grow. But externalities is not the right term, for such matters did not behave themselves and remain outside the frame of the project. Indeed, as we will now demonstrate, as the initial project money came to an end, the overflows really started to make themselves felt, a process that had implications for the future of the gardens, the women, and for similarly funded socioenvironmental actions. In this, gardens are, if not unique, then particularly problematic. Gardens are matters of process and ongoing achievements. Once created they require continuing care. In this they are something of a challenge to the one-stop temporality of current funding models. In the final section of the paper we discuss the sustainability of the project and relate this to the ways in which frames and overflows are conceptualised and enacted by funding agencies.

4 Organising futures

Three years in and the project was widely praised as a success. The plots were visually impressive (see figure 4). Raised beds had been constructed and various fruits and vegetables cultivated, the women reported that the group had now become a major part of their social lives and that they enjoyed growing crops, sharing knowledge, and learning from each other and from the project officer. All of the appropriate boxes could be ticked. The project was a success in its own, framed, terms. If that was the end of the story then all well and good. But it was not, and it was at this point that the overflows, those other matters that proliferated during the life of the project, really started to encroach. For if the project was to leave a lasting trace on the east Birmingham landscape, if the women's activity was to carry on, then there were some large issues to address. To be sure, there was an exit strategy for the purchaser in this market relation (the donors had their project delivered, their measurables measured, and their own organisational relations secured). Likewise, CSV Environment could, in theory at least, have left the product/project with their heads held high, their end of the bargain having been met. But the entanglements that made the project product possible also made it difficult to cut the links between the women, the gardens, the project officer, and CSV Environment.

Difficulties faced in cutting funding relationships and disentangling from projects are endemic to the opportunity fund sector. However, we want to argue that the way in which entanglements are commonly characterised ignores the ecologies of action, or the multiplicity of associations, and thereby risks undermining self-professed objectives of developing sustainable urban practices. We will approach this in three ways. First we will discuss overflows in a little more detail under the heading of 'others' in order to characterise the enaction of the social as a heterogeneous set of activities which involves different economies, ecologies, and many others besides. Second, we look briefly at the standard response to entanglement as a fairly narrow economic relation called social capital. Finally, in suggesting the limitations of social capital, we draw together some conclusions on the interrelations of calculations and its others in order to suggest a way of reconfiguring calculative agencies.

4.1 Others

We can start by specifying a little further the others that made the project possible. Clearly, and as we have seen, the funding market has effects, directing resources to certain kinds of endeavour, ones that make a project present (partly at the expense of core funding). But we have also suggested that such divisions need not be overemphasised. There are two things to say here. One, although there is a danger, as we have noted,

that externalities can be made invisible and disappear, that a focus on deliverables leads to a lack of attention paid towards other matters, there is also the likelihood that they will come back to haunt or pester the project. Callon (1998b) refers to the latter matters as overflows, things that are cut out of the account in the peculiar time and space of the calculation, but that may proliferate in other times and spaces partly as a result of being overlooked or left out of the reckoning. This is one sense of the term 'othering' that Callon and Law (2005) utilise in their discussion of qualculation. It is the material semiotic sense that there can be no process of definition/identity without simultaneously producing the possibility of nondefiniton/nonidentity. "A boundary, so to speak, *implies* the cross-boundary work of making that boundary and putting things on the other side which then 'overflow' the division. The normal implies the abnormal. The garden implies the weeds" (Callon and Law, 2005, page 722, emphasis added). We have already characterised these as entanglements that make the disentangled project possible, and that also make abandoning a successful project hard if not impossible. In addition, it should be added here that the focus on delivering targets and measures can have the effect of obscuring sustainable solutions for matters that are initially outside the frame. So complaints about the shift to project funding is partly a complaint that there is little scope to attend to the work of developing the organisation, or attempting longer term community development. The overflow comes when such failures start to undermine the delivery of projects, or, in our case, the ability to perpetuate actions into the future. Similarly, target practice can make other matters more complex. The drive to measure the project in terms of numbers of gardens had the effect, in an urban environment, of adding to transport difficulties.

Second, there are other matters that are not simply made as frames are constructed. Although actor-network theorists have become better at dealing with others who are outside to the process of ordering or who are made as orders are enacted, they have been less successful in understanding those others that have little if anything to do with a conventional geography of insiders and outsiders [though see Hetherington and Lee (2000) for one approach, and Callon and Law (2005) and Law (2004b) for another]. Yet there is a host of matters that may well be in the background for most of us and for most of the time. These matters that may move between virtual and actual experience, may have different histories and geographies than those things that are formatted and then overflow. They may include relations of generosity, receptivity, response-ability (Barnett, 2004; Diprose, 2002; Thrift, 2004b), relations that are other to calculation, but are not necessarily in a relation of antagonism to other modes of acting.[(2)] Nor are they natural or necessarily best thought of as existing ready to be nurtured. So, for example, in order to experience noncalculation, the nonframing of a return, huge amounts of ground work may be needed in building contacts, developing ways of communicating, trusting others, finding means of coexisiting, repairing relations, and so on (see Callon and Law, 2005; Thrift, 2005). Although Callon and Law have demonstrated this for religious meetings and for agape, we would suggest that attachment to and a passion for urban gardening that Neil, the project officer, and some of the women developed involved disentangling, in order to be taken into, to become entangled in, the group and its activities. Like calculations these moments of noncalculation were disentanglements, and like calculations, they relied on all manner of entanglements in order to be performed [see Callon and Law (2005); for more on passion and gardening see Degen et al (forthcoming)]. We are suggesting that there is another kind of giving here, or, better, a kind of being given, for it occurs not as

[(2)] It would be our contention that this is a form of conviviality that is more than human, and so we perhaps depart somewhat from those who would limit responsive others to human beings. See, for example, Wolfe (2003), Derrida (2003), Hinchliffe and Whatmore (2006).

some noble virtue but as the possibility for and result of intercorporeal relations (Diprose, 2002).

In short, we are suggesting that calculations and others exist in mixes, neither of them are natural or visited on the scene from elsewhere. Nor is it the case that they exist in mutually exclusive domains, or *necessarily* threaten one another's existence (though they might well do this). They can and indeed do coexist and can enable one another. It is the nature of those mixes that makes or breaks socioenvironmental action rather than the championing of one over the other (and such championing is tantamount to rendering the incalculative calculable). So we are arguing that economic worlds are heterogeneous, but rather than leaving it there, something perhaps early versions of actor-network theory were prone to do, we want to go a little further and explore the ontics of these mixtures, in the making. We want to go a little further and ask what kinds of spatial and temporal patterns can exist in these more-mixed circumstances? Is this simply a case of coexistence and mutual support, or are there overlaps that are destructive as well as creative? What are the interferences as Haraway (1997) and Law (2002; 2004a; 2004b) might call them? In the terms of this paper, how does the coexistence of calculations and these others affect the sustainability of urban green spaces? What, in other words, are the *ecologies* of action?

4.2 Social capital

One way of handling the aftereffects of opportunity funding is to employ the economic metaphor of capital in order to convey a sense of the gains made once funding sources start to dry up. Initiated as a term by Bourdieu (1986), reworked and popularised by Putnam (1993; 2000), social capital tends to refer to the norms of reciprocity and associations which together can form resources for mutual benefit (see also Das, 2004; Fine, 2002; Mohan and Mohan, 2002). Through a series of often-questionable logical leaps it is assumed that areas with low amounts of reciprocity and networks, therefore low in social capital, are generally expected to be economically worse off. As Fine (2002) suggests, the term and this form of reasoning have moved through policy circles like wildfire. It raises "the principle of self-help … from the individual to some collective level of 'community' " (Fine, 2002, page 796). In so doing it provides the almost perfect narrative for imagining the future of projects once they have been disentangled from funding dependency. All those entangled externalities that make a project possible can, along with human capital, form the basis for an extension of the funded activity in the form of an enabled community who either find ways and means of continuing the work specific to the project, or who take up new initiatives. In the crudest economic models, capital here refers to a "physical or other asset that ultimately provides a stream of utility to individuals" (Fine, 2002, page 798). Fine provides a trenchant critique of social capital, arguing among other things that it reifies a particular version of social action. Similarly, the Black Environmental Network suggest that such a model of self-help has little grasp of the situations within which many black and minority ethnic groups are working:

> "Funders tend to consider their commitment in the short term and challenge small organisations with providing an exit strategy which would make no further demand on the funder as proof of their being fit to have a grant. This is experienced as an enormous and unfair burden, especially when a high proportion of projects from ethnic groups are ones which enable ethnic groups to get a first foothold on the problems to be addressed" (Black Environmental Network, 2000, page 31).

Without wanting to undermine these kinds of response to social capital, it is worth noting that advocates and critics of social capital can risk reproducing a similar economic landscape whereby agency and structure are somehow treated independently

(advocates celebrating the possibilities of self-help and agency, critics often edging towards reification of structure). Here we want to avoid making such a distinction prior to our analysis. So we want to avoid using terms such as social capital, which seems to widen the gap between agency and structure (Callon, 1998a, page 11), and tends to reproduce the notion of a singular economy to which people are more or less successfully attached.

Our question becomes: what if we understand those others to calculation not as some form of potential contributor to social agency that can equip people to (re)enter *the* economy but as different economies that are implicated, or folded into, and contribute towards "capitalism's specific forms of existence" (Gibson-Graham, 1996, page 13). Once we have understood the production of economy as a heterogeneous achievement it becomes both more amenable to analysis and to contestation. We can answer this question by returning to our case, allowing us in the conclusion to suggest some implications of our arguments for funding and for sustainable environmental action.

The Concrete to Coriander project has enabled all manner of things to happen in east Birmingham. Some of those have been disentangled and delivered. Many other things remain entangled, but not necessarily in ways that fit a social-capital mold. To be sure the women are less isolated, they are more likely to help one another, have met and engaged with other allotment gardeners, and form various kinds of social network. They have formed a cooperative which shares tools, seeds and vegetables, and they have learned and practised skills and gained qualifications in food preparation. The latter have enabled the women to provide cooked food at numerous public fetes, environmental days, school and community events, and so on. But many of the women are also relatively elderly and close to retirement age. They have numerous domestic and work commitments and, for some, are reliant on social-welfare payments. The women's future is unlikely therefore to be as a group of social entrepreneurs. All of which means that it is even more difficult for CSV Environment to disentangle from the project. The group needs resources to keep going, and it is unlikely to meet those needs on its own. Rather than view this as somehow insufficient, as a failure on the part of the project to *enable* communities to meet their own needs, it might be more useful to note the mixture of activities that make a project and that make economies and environments. In so doing it becomes important to avoid judging all those activities against one criterion of a specious economic model, or, in other words, to avoid elevating specific relations to structures that are themselves composite and complex matters. It also becomes important to view these positive and differentiated economic forms as more than local. That is, just as they should not necessarily be judged on the extent to which they mimic a self-identical capitalism, they should not be judged on their degree of self-sufficiency. As other kinds of economy they can draw upon and contribute towards other economies. They can and might well interfere with these other economies once they are no longer seen as subservient to them. As Gibson-Graham puts it:

> "Theorizing capitalism itself as different from itself—as having, in other words, no essential coherent identity—multiplies (infinitely) the possibilities for alterity. At the same time, recontextualising capitalism in a discourse of economic plurality destabilizes its presumptive hegemony" (1996, page 15).

This it seems to us is a central lesson for future funding relations. Rather than assume, as some now do,[3] a requirement to *enable* all recipients of funding to become entrepreneurs, social or otherwise, it is rather more important to view economy as

[3] 'Enabling' as opposed to 'engaging' black and minority ethnic groups in Birmingham has been championed as something of a step change in the ways in which funding is storied. We are not necessarily contradicting this move, only suggesting that questions be raised over enabling for what.

internally mixed and differentiated sets of activities. The harbingers for such a view are themselves mixed. At the time of writing there are reviews of lottery-funding formats which may have the effect of moving funding closer towards the NOF model—highly prescriptive project funding, quarterly accounts with a heavy administration load. Such a model starts to reduce the degree of 'openness' that we would argue was so important in making Concrete to Coriander a success. Meanwhile, the Neighbourhood Renewal Fund, which has been successfully applied to by CSV Environment to keep the Concrete to Coriander project up and running for the time being, is unevenly administered depending upon the local-authority office which hosts the partnership. As devolution of the city's services and government proceeds and local strategic partnerships with nongovernmental organisations and others like Primary Health Care Trusts are being convened, there may be even greater scope for different practices to evolve [although the current experience of Local Strategic Partnerships has tended towards greater central coordination rather than cogovernance (see Johnson and Osborne, 2003)]. Again, therefore, there is room for developing a dialogue upon the nature of funding, just as there is a need to tie this into a discussion of how projects can be successfully coordinated (through calculative agencies) at the same time as promoting the notion that renewal is also about cogovernance through civic action, and, vitally, about contesting a single narrative of economy.

5 Conclusions and two responsibilities

Organising ecology is by no means straightforward. There are few resources available in many 'local' settings to assume that people will do things for themselves. Likewise, it is inappropriate to rely on forms of coordination which direct resources and efforts solely to calculable entities. In order to generate and foster enthusiasms for greening urban areas calculations may well be necessary. But it is also evident that a good deal relies on forms of generosity, being given and others besides that are not necessarily captured by the exchange of gifts. It is the coexistence of these forms of giving that seem crucial to the success of projects. We have followed a project that has been successful largely on account of the ability of various people, including the women, the project officer, and the funding agencies, to be responsive to one another in ways that are not only about an exchange of equivalencies.

One way of conceptualising this and extending the remit to a broader discussion of funding is to say that the calculative agencies that we have traced have delivered on two kinds of responsibility —a responsibility to act and a responsibility to otherness (see Barnett, 2004; White, 1991). The former as we have suggested is indicative of a responsibility that follows from a requirement to perform in the name of, as a representative of, with the "anticipation of being held to account, expected to give reasons, and asked to make justifications" (Barnett, 2004, page 522). As Barnett also suggests, such a responsibility enacts a particular set of temporal modalities, one that serves time on a project and makes for an ecology of action that can militate against propagation and sustainability. There is an urgency to the funding market. Indeed, as people in various National Lottery distribution bodies told us, there is a requirement to 'get the money out of the door' as soon as possible, in order to be seen to be delivering, to be making 'present' (see also Department for Culture Media and Sport, 2003). The second kind of responsibility is a responsibility to otherness. The temporal modality here is patience, the time needed to cultivate, to learn, to grow, perhaps. From cultivating a vegetable patch to juggling funding sources and project work, there is some requirement to acknowledge others that make any action possible. Which is not to say that the world needs codifying in advance of every action or decision to act, something that would be clearly impossible and would make action impossible. And nor is it to say

that calculation is necessarily detrimental. Rather it is to acknowledge that actions are multiple, always composed of ecologies of calculative and noncalculative orderings. Attending to the ecology of action, to the urgency and the patience, to the responsibility to act and to otherness, is part and parcel of making a difference. For the calculative agencies that we have partially traced in this paper, the lesson would not be to withdraw from calculation, but to enrich what is understood by the ecologies that are produced. White puts it rather well:

> "Large complex societies will always be heavily constructed around organisational routines and institutional projects, from the perspective of which the appearance of difference will often elicit more irritation than delight. The more the sway of the responsibility to act dominates a situation, the more this will be the case. The real issue is how to relax the pull of this responsibility before, within and after such routines and projects; how to create slack and space within which the mood of delight can flourish. Part of this task will be to think creatively about when, where and how intersubjective difference can be actively fostered" (White, 1991, page 129).

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